

Patent Abstracts of Japan

PUBLICATION NUMBER : 11153787
PUBLICATION DATE : 08-06-99

APPLICATION DATE : 19-11-97
APPLICATION NUMBER : 09334973

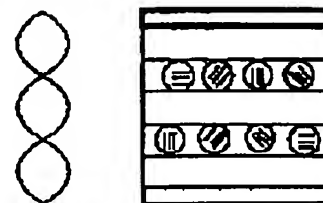
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INT.CL. : G02F 1/1333 C09K 19/38

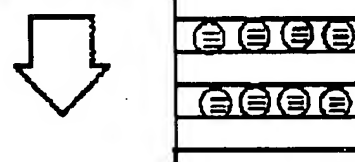
TITLE : HIGH-POLYMER DISPERSION TYPE
LIQUID CRYSTAL ELEMENT AND ITS
PRODUCTION

レーザー干渉光照射 11



(a)

偏向光照射 12



(b)

ABSTRACT : PROBLEM TO BE SOLVED: To enable the alignment control of the low-polymer liquid crystals in a high polymer dispersion type liquid crystal element having a layer structure in which the refractive index changes periodically by causing the polymn. phase sepn. of a polymeizable compsn. contg a polymerizable compd. having a photodimerizable structure and the low-polymer liquid crystals.

SOLUTION: The polymerizable compsn. is prepd. by mixing the polymerizable compd. having the photodimerizable structure, the low-polymer liquid crystals and a polymn. initiator of a polymerizable group and is injected into a cell. When this cell is irradiated with a laser interference beam 11, the curing of the polymerizable compd. takes place and a high-polymer layer of a low refractive index is formed in a region of the large amplitude of the laser interference beam 11. The polymn. phase sepn. takes place and high polymer dispersion type liquid crystals of a high refractive index are formed in the region of the small amplitude of the laser interference beam 11. These two regions are specially alternately repeated, the high polymer dispersion type liquid crystal element of a layer structure having a periodically changeable refractive index is produced and the low molecule dispersion type liquid crystal element in the element is uniformly irradiated with the polarized light 12.

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